

Title (en)

SINGLE SENSOR-BASED DUAL-SPECTRAL CAMERA SYSTEM AND IMAGE PROCESSING METHOD

Title (de)

AUF EINZELSENSOR BASIERENDES DOPPELSPEKTRALES KAMERASYSTEM UND BILDVERARBEITUNGSVERFAHREN

Title (fr)

SYSTÈME DE CAMÉRA À DOUBLE SPECTRE BASÉ SUR UN CAPTEUR UNIQUE ET PROCÉDÉ DE TRAITEMENT D'IMAGE

Publication

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Application

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Abstract (en)

Provided are a dual-spectrum camera system based on a single sensor and an image processing method which relate to the technical field of imaging capturing and processing. The camera system includes a lens, an image sensor, and a logical light separation module and an image fusion module that are sequentially connected to the image sensor. The image sensor includes red-green-blue (RGB) photosensitive cells and infrared radiation (IR) photosensitive cells. An infrared cut-off filter layer is arranged on a light incoming path of the RGB photosensitive cells. The image sensor receives incident light entering through the lens to generate an original image and sends the original image to the logical light separation module. The logical light separation module converts and separates the original image into a visible light image and an infrared image, and sends the visible light image and the infrared image to the image fusion module to generate a fused image. An object of embodiments of the present invention is to provide a dual-spectrum camera system based on a single sensor and an image processing method, so as to simplify an optical structure of the dual-spectrum camera system, thereby facilitating miniaturization of the camera apparatus, reducing the cost, and improving the image effect.

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